

THE SAVAGE GARDEN: CHILLY NIGHTS

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Keywords: cultivation.

Some of the most fascinating carnivorous plants come from climates that are usually considered Mediterranean or maritime. These include such beast as *Cephalotus*, the West Australian Pitcher Plant; *Drosophyllum*, the Dewy Pine that grows primarily near the coast of Portugal; and *Darlingtonia*, the Cobra Plant from California and Oregon. There are many others, particularly sundews from West Australia and South Africa, like *Drosera regia* and the Cape sundews. Another highly coveted group of carnivores is species that grow near the equator but at high elevations, such as *Heliamphora* and most *Nepenthes*. In fact, while centered on the tropical island of Borneo (which is bisected by the equator and certainly as torrid as a climatic zone can get), around seventy percent of the Tropical Pitcher Plants grow at elevations higher than 900-1200 m (3000-4000 feet). The climate at these altitudes is cool, particularly at night.

Many hobbyists succumb to the pulsing ache of desire to grow these cool-loving plants without considering this key element of their survival. These folks may pay a high price for these rare plants, or may attempt to grow them from seed. Reflecting upon their thriving specimens of Venus Flytraps and American Pitcher Plants, they may become confident they can do as well with the mustached *Darlingtonia* or toothsome *Nepenthes villosa*.

Take heed, dear grower! To truly succeed with Mediterranean or tropical highland species, you may have to do one of two things: move or invest in a good air-conditioner!

The key to making such vegetable gargoyles truly happy and hungry is simple: cool nights. This means temperatures dropping to between 10-15°C (50-60°F). Some of these plants may survive slightly warmer night temperatures for the summer, if you can at least lower the temperature to below 18°C (65°F). This nightly cooling is, of course, easier to attain in winter, but you may have to lower your house thermostat considerably if you grow such plants in a terrarium or on a sunny windowsill.

I am often amazed at the cultural differences in things such as home heating. Most Europeans and folks on the west coast of North America, where summer nights are often cool, never think of heating their homes in summer and let winter night temperatures drop into the 10°C range (lower 50s°F). Yet many a time I will get a phone call from some other location, from a person who wishes to grow a plant such as highland *Nepenthes* in a living room terrarium. When I find out their heat goes on in winter when temperatures drop below 20°C (68°F), I tell them to drop it to 10°C (50°F) or lower, or switch to tropical lowland plants.

This does not mean that temperatures need to plummet once the sun goes down. In my own experience I believe the crucial hours of cooling the temperatures is between midnight and 6 a.m.

The length to which a grower may go to create the ideal cool temperatures many a carnivore may require was shown to me during a visit to Florida several years ago. Cliff Dodd had a highland greenhouse festooned with luxurious vines of the most exotic *Nepenthes* available at the time. Along one wall of the compact glasshouse was not one, but two air-conditioners, running at full blast. After a few minutes in the breezy chill, I had to escape to the heat outside! His second location for growing highland plants was a concrete sub-basement, where I saw the most

awesome, perfect specimens of *Heliamphora* I had ever laid eyes on. He grew them in massive tanks under growlights, the glass enclosures beaded with dew. Again, air-conditioners blasted cold air. It reminded me of an intrepid explorer who told me of seeing the Sun Pitchers in Venezuela. "Here we were practically on the equator, and I was so wet and cold after being in the sweltering heat of Caracas, my lips turned blue and my teeth were chattering!"

If you have a partitioned greenhouse or a room or basement where you wish to grow such plants, it does not necessarily mean a huge investment in central air-conditioning. Last summer I played tourist in the desert town of Virginia City, Nevada. It was 41°C (106°F) outdoors in the shade, yet I wandered into a small gift shop that had its saloon-style swinging doors wide open. Inside the shop, the air was downright chilly. In one corner was what appeared to be a simple, free-standing fan. Upon closer inspection, I saw it was some new design of a portable air-conditioner—a type I had never before seen. I could hardly believe the cold wind blowing from it. It simply plugged into a regular electrical outlet. I marveled with the proprietor, who told me it was new on the market and reasonably cost-effective to run. I thought of how helpful it would be when growing cool-adapted plants. It was definitely superior to bulky window air-conditioners or central air-conditioning systems.

Of course, the other way to get a colder climate is to move! I have known at least a couple of serious growers who have done just that: they relocated to a more hospitable climate to grow the plants they love. Now the only thing they have to fret about is global warming!

In previous columns I moaned and groaned about the poor results I had experimenting with coco peat, the product derived from coconuts. I last left this subject by mentioning I would try coco chips, a similar product, with *Nepenthes* and *Heliamphora*. After six months the results are in: total disaster! I transplanted a number of specimens from the two genera into soil mixes using a liberal amount of the chip product. The symptoms were identical with both types of pitcher plants. While only a few plants died outright, the remainder grew but slowly, and the pitchers developed malformed and turned crispy brown prematurely. The sickly symptoms were so obvious that I could pick out the plants potted with coco chips among many others that had not been and were healthy. In conclusion, all horticultural products made from coconut fiber should be avoided due to their high salt contents.

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